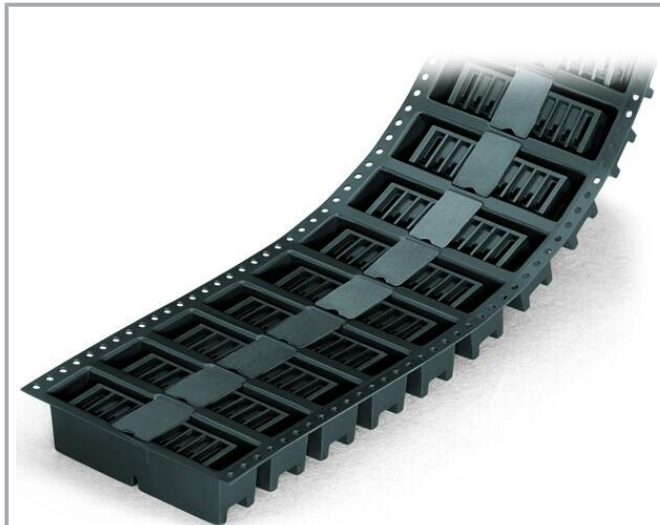


## Data sheet | Item number: 734-172/105-604/997-407

THR male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 12-pole; black

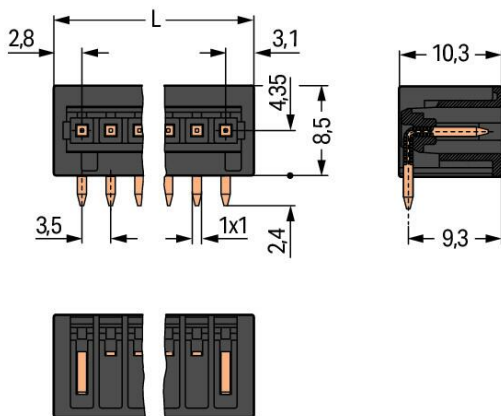
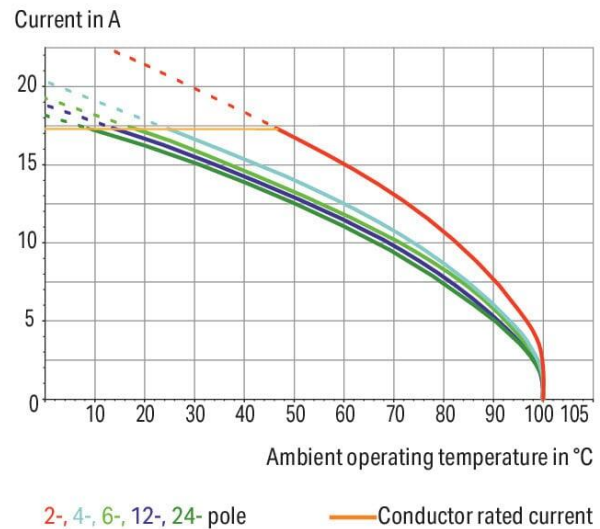
[www.wago.com/734-172/105-604/997-407](http://www.wago.com/734-172/105-604/997-407)



 Picture differs from the item.

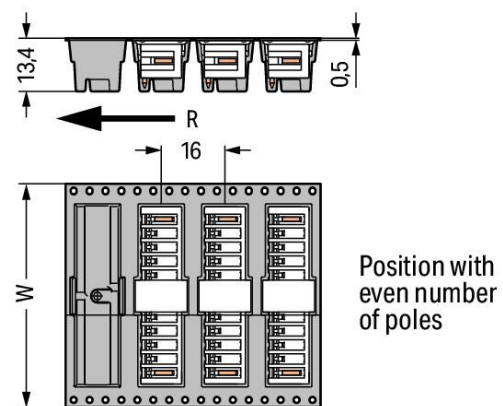
Color: 

**Derating Curve**  
1-conductor female connector (734-102) with  
THT male header (734-132)  
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 0.8



Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 5.9 \text{ mm}$



Dimensions in mm

W = tape width

R = feed direction

Subject to changes. Please also observe the further product documentation!

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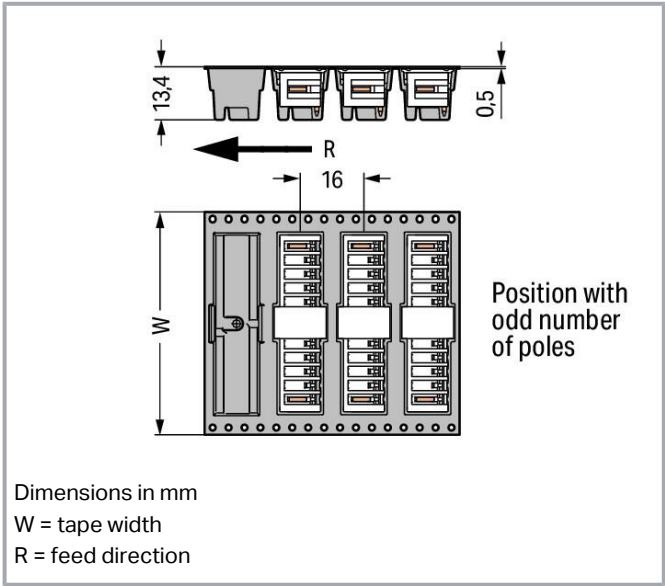
32423 Minden

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Item description

- THR male headers for reflow soldering in SMT applications
- Available in tape-and-reel packaging for automated pick-and-place PCB assembly
- Optimal thermal penetration via pin enclosure design provides lower soldering temperatures
- 100% protected against mismatching
- Coding via coding fingers

Data  
Notes

Safety information

The *MCS – MULTI CONNECTION SYSTEM* includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected /disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

Variants:

Other pole numbers  
Other solder pin lengths  
Gold-plated or partially gold-plated contact surfaces  
Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

Electrical data

Subject to changes. Please also observe the further product documentation!



## Ratings per IEC/EN

| Ratings per                   | IEC/EN 60664-1                                                       |
|-------------------------------|----------------------------------------------------------------------|
| Nominal voltage (III/3)       | 160 V                                                                |
| Rated impulse voltage (III/3) | 2.5 kV                                                               |
| Rated voltage (III/2)         | 160 V                                                                |
| Rated impulse voltage (III/2) | 2.5 kV                                                               |
| Nominal voltage (II/2)        | 320 V                                                                |
| Rated surge voltage (II/2)    | 2.5 kV                                                               |
| Rated current                 | 10 A                                                                 |
| Legend (ratings)              | (III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2 |

## Ratings per UL

| Approvals per                  | UL 1059 |
|--------------------------------|---------|
| Rated voltage UL (Use Group B) | 300 V   |
| Rated current UL (Use Group B) | 10 A    |
| Rated voltage UL (Use Group D) | 300 V   |
| Rated current UL (Use Group D) | 10 A    |

## Ratings per CSA

| Approvals per                   | CSA   |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 10 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

## Connection data

|                            |    |
|----------------------------|----|
| Total number of potentials | 12 |
| Number of connection types | 1  |
| Number of levels           | 1  |

## Connection 1

|             |    |
|-------------|----|
| Pole number | 12 |
|-------------|----|

## Physical data

|             |                       |
|-------------|-----------------------|
| Pin spacing | 3.5 mm / 0.138 inches |
|-------------|-----------------------|

Subject to changes. Please also observe the further product documentation!



|                                          |                          |
|------------------------------------------|--------------------------|
| Width                                    | 44.4 mm / 1.748 inches   |
| Height                                   | 10.9 mm / 0.429 inches   |
| Height from the surface                  | 8.5 mm / 0.335 inches    |
| Depth                                    | 10.3 mm / 0.406 inches   |
| Solder pin length                        | 2.4 mm                   |
| Solder pin dimensions                    | 1 x 1 mm                 |
| Plated through-hole diameter (THR)       | 1.4 <sup>(+0.1)</sup> mm |
| Reel diameter of tape-and-reel packaging | 330 mm                   |
| Tape width                               | 56 mm                    |

## Mechanical Data

|                          |     |
|--------------------------|-----|
| Variable coding          | Yes |
| Anti-rotation protection | Yes |

## Plug-in connection

|                                      |                     |
|--------------------------------------|---------------------|
| Contact type (pluggable connector)   | Male connector/plug |
| Connector (connection type)          | for PCB             |
| Mismating protection                 | Yes                 |
| Plugging without loss of pin spacing | No                  |
| Mating direction to the PCB          | 0 °                 |
| Locking of plug-in connection        | none                |

## PCB contact

|                                     |                                          |
|-------------------------------------|------------------------------------------|
| PCB contact                         | THR                                      |
| Solder pin arrangement              | over the entire male connector (in-line) |
| Number of solder pins per potential | 1                                        |

## Material data

|                             |                                                          |
|-----------------------------|----------------------------------------------------------|
| Note (material data)        | Information on material specifications can be found here |
| Color                       | black                                                    |
| Material group              | I                                                        |
| Insulation material         | Polyphthalamide (PPA GF)                                 |
| Flammability class per UL94 | V0                                                       |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> )                   |

Subject to changes. Please also observe the further product documentation!



|                    |         |
|--------------------|---------|
| Contact plating    | Tin     |
| Fire load          | 0.07 MJ |
| Weight             | 3.2 g   |
| MSL per J-STD 020D | 1       |

## Environmental requirements

|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +100 °C |
| Processing temperature  | -35 ... +60 °C  |

## Commercial data

|                       |               |
|-----------------------|---------------|
| eCl@ss 10.0           | 27-44-04-02   |
| eCl@ss 9.0            | 27-44-04-02   |
| ETIM 8.0              | EC002637      |
| ETIM 7.0              | EC002637      |
| PU (SPU)              | 280 pcs       |
| Packaging type        | bag           |
| Country of origin     | DE            |
| GTIN                  | 4044918849012 |
| Customs tariff number | 85366930000   |

## Environmental Product Compliance

|                        |                         |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

## Approvals / Certificates

### General approvals

| Logo                                                                               | Approval                                     | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|----------------------------------------------|--------------------------|------------------|
|                                                                                    | <b>CB</b><br>DEKRA Certification B.V.        | EN 61984                 | NL-54190         |
|  | <b>KEMA/KEUR</b><br>DEKRA Certification B.V. | EN 61984                 | 71-<br>105522    |

### Approvals for marine applications

| Logo | Approval                | Additional Approval Text | Certificate name |
|------|-------------------------|--------------------------|------------------|
|      | <b>DNV</b><br>DNV GL SE | -                        | TAE000016Z       |

Subject to changes. Please also observe the further product documentation!



Counterpart



Item no.734-112  
1-conductor female connector; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 12-pole; 100% protected against mismatching; 1,50 mm²; light gray

www.wago.com /734-112

Optional accessories

|                                                                                  |  |                      |  |
|----------------------------------------------------------------------------------|--|----------------------|--|
| Coding                                                                           |  |                      |  |
| Coding                                                                           |  |                      |  |
|  |  |                      |  |
| Item no.: 734-159                                                                |  | www.wago.com/734-159 |  |
| Coding key; to be snapped above top level; black                                 |  |                      |  |

Downloads

Documentation

|                        |  |            |                 |          |
|------------------------|--|------------|-----------------|----------|
| Additional Information |  | 2019 Apr 3 | pdf<br>2.1 MB   | Download |
| THR Soldering Process  |  |            | pdf<br>548.2 kB | Download |

CAD/CAE-Data

|                                                    |  |  |     |          |
|----------------------------------------------------|--|--|-----|----------|
| CAE data                                           |  |  |     |          |
| EPLAN Data Portal 734-172/105-604/997-407          |  |  | URL | Download |
| CAD data                                           |  |  |     |          |
| 2D/3D Models 734-172/105-604/997-407               |  |  | URL | Download |
| Asset Administration Shell                         |  |  |     |          |
| Asset Administration Shell 734-172/105-604/997-407 |  |  | URL | Download |

PCB Design

Subject to changes. Please also observe the further product documentation!



[URL](#)

[Download](#)

Symbol and Footprint via Ultra Librarian 734-172/105-604/997-407

CAX data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

Supported formats:

- Accel EDA 14 & 15
- Altair
- Altium 6 to current version
- Autodesk Fusion 360
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics
- BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design
- Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

Symbol and Footprint via SamacSys 734-172/105-604/997-407

[URL](#)

[Download](#)

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Supported formats:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio
- CR-5000
- CR-8000
- DEHDL
- DesignSpark PCB
- DesignSpark PCB PRO
- DipTrace
- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD\_Allegro16
- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

PCB Component Libraries (EDA), PCB CAD Library SamacSys Electronic Component Search Engine

Environmental Product Compliance

Compliance Search

|                                                                                                                                                      |     |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| Environmental Product Compliance 734-172/105-604/997-407                                                                                             | URL | Download |
| THR male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 12-pole; black |     |          |

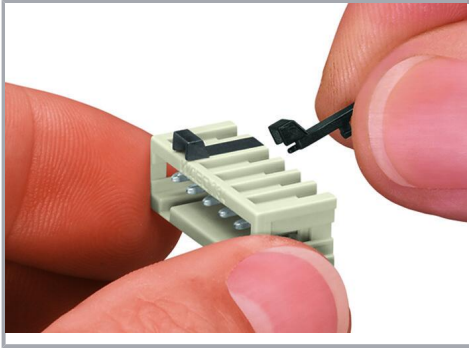
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## Installation Notes

### Coding



Coding a male header – fitting coding key(s).

### Product family

**MCS MINI**

[Show all products from the family](#)

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